

DWR WAREHOUSE

Executive Summary

97 JUL 28 PM 2:47

Project Title: Colusa Basin Drain --- Fostering Local Land Stewardship**Project Description:**

The Colusa Basin Drainage District (District) was initially formed to manage problems associated with flood control, drainage and subsidence occurring within 650,000 acres of valley land in Colusa, Glenn and Yolo Counties. Over time, changes in land use, coupled with changes in California water policies, have presented challenges to traditional flood water management practices. In response, the District has taken the initiative to develop and implement new ways to put water resources to work that will benefit as many users as possible. As part of this effort, the District has developed an innovative water management program that will allow for the conjunctive use of water resources to meet the diverse needs of agricultural, urban, fish and wildlife interests in the Colusa Basin Drainage District.

The following six goals serve as the guiding principals for implementing conjunctive use efforts that will benefit 13 significant watersheds comprising the Colusa Basin Drainage District: (1) Preserve and enhance agricultural production; (2) Capture surface or stormwater for conservation, conjunctive use and increased water supplies; (3) Provide flood and drainage water protection for urban and agricultural interests; (4) Assist in groundwater recharge effort to help alleviate overdraft and land subsidence problems; (5) Improve and enhance opportunities for restoration of wetland, riparian and fishery habitats; and (6) Improve water quality. Following these principals, the District developed an Integrated Resource Management Plan that brought together representatives from diverse groups or stakeholders within the 13 watersheds. Representatives from agricultural, environmental, urban and rural officials, federal, and state agencies were all involved in a series of interactive-decision making workshops. Stakeholders identified primary issues that could be resolved through a mutually beneficial program related to flooding, protection of agricultural land, urban needs, groundwater supplies, water quality, and fish and wildlife habitat. Structural and nonstructural remedies were identified and prioritized.

Approach/Tasks/ Schedule

The Wildlife Conservation Board (WCB), working with local landowners, the Glenn County Resource Conservation District (GRCD), the Colusa County Resource Conservation District (CRCD), the Natural Resources Conservation Service (NRCS), and the Department of Fish and Game (DFG), is requesting \$674,000 to develop and implement ten restoration projects. These projects are designed to reduce peak runoff of flood waters, reduce and sometimes eliminate soil erosion, and improve the quality of drain water that flows into the Colusa Basin Drain (the Drain) and ultimately into the Sacramento River. Resource needs and land use practices on private property will be evaluated, and solutions implemented with respect to flood and drainage problems, erosion, sediment loads, and water quality. Consistent with past practices, the WCB will award grants to the local RCD for the actual construction of the improvements. To protect

CALFED's investment, participating landowners will be required to enter long term operation and maintenance agreements. This approach has proven very successful, in-part because of a requirement that to qualify for cost-share assistance, landowners must participate in educational workshops. The workshops will demonstrate how land management practices can be implemented that protect and restore the resources, primarily wetland, riparian and aquatic habitats and sustain the economic viability of the agricultural operation.

Justification for the Project and Funding by CALFED

Land use practices in the upper reaches of the watershed have a direct impact on natural flood channels, sediment load, and the quality of water flowing into the Drain and the Sacramento River. Restoring and integrating flood plain and channel configurations with riparian and wetland corridors will further benefit the Drain and alleviate impacts to agricultural operations. Fostering local land use practices that restore and maintain base flows will provide a natural flow regime and maintain sediment transport capacity while enhancing the economic sustainability of agricultural operations. It will further improve the health of the watershed and ultimately the quality of water flowing into the Drain and the Sacramento River.

Applicant Qualifications

Building partnerships and working at the local level, the WCB has implemented numerous projects designed to integrate and mutually benefit agricultural and grazing operations with the wetland and riparian needs of the watershed.

Monitoring and Data Evaluation

Project monitoring and evaluation will be conducted by the GRCD, CRCD, NRCS, DFG, and the WCB. Project teams will conduct pre and post project evaluations and perform annual monitoring of the projects. Progress will be measured against preestablished goals and objectives established by the landowner, the RCDs, DFG, and WCB. Recovery of riparian, wetland, and aquatic habitat, maintenance of base flows, reduction of sediment loads and improved water quality will be evaluated.

Local Support/Coordination With Other Programs/Compatibility with CALFED Objectives

This project is supported by the local RCDs, the Colusa Basin Drainage District Board of Directors, NRCS, and DFG. The project is compatible with the goals of USDA and will be used to leverage additional cost-share dollars from the USDA programs. This project directly supports CALFED objectives to (1) decrease sediment loads, restore base flows, reduce erosion problems, and implement watershed-wide solutions to water quality problems affecting the Drain; and (2) promote landowner expertise to manage lands that benefit agricultural and watersheds.

II. Title Page

a. Title of Project

Colusa Basin Drain --- Fostering Local Land Stewardship

b. Name of applicant/principal investigator(s); address; phone/fax/E-mail; organizational, institutional or corporate affiliations of applicant/principal investigator(s).

Marilyn Cundiff, Project Manager
Program Manager, Inland Wetlands Conservation Program
Wildlife Conservation Board
801 K Street, Suite 806
Sacramento, California 95814

phone: (916) 445-1093, fax (916) 323-0280
E-mail: mcundiff@hq.dfg.ca.gov

c. Type of organization and tax status

State Agency

d. Tax Identification Number and/or Contractor license, as applicable

Not applicable

e. Technical and Financial Contact person(s), address, phone/fax/E-mail, (if different from above)

Wendell Gilgert, District Conservationist, Natural Resources Conservation Service
132-B North Enright
Willows, California 95988

phone: (916) 934-4601, fax (916) 934-0184

Participants/Collaborators in Implementation

Glenn, Colusa and Yolo County, Resource Conservation Districts, and the private landowners within the watershed.

f. RFP Project Group Type(s) (Construction; Acquisition; Other Services)

Group 1: Public Works/Construction Projects

III. Project Description

a. Project Description and Approach

Technology exists to remedy many natural resource problems affecting upper reaches of the watershed and their consequent influence on downstream rivers and tributaries. While the technology is available, private landowners who are economically dependent upon the watershed are oftentimes the last to benefit from this information. If our natural resources are to be protected, efforts must be made to meet the increasing challenges facing the private landowner. Projects must be designed that compliment and meet multiple objectives. Stated differently, resource protection efforts must be implemented that make economic, social and environmental sense. To that end, the WCB, working in partnership with local landowners, the GRCD and the CRCDD, has been very successful at implementing projects in the upper reaches of the watershed that benefit not only the wetland, riparian, and aquatic habitat, but the farming and ranching activities that are dependent upon the watershed.

This proposal is requesting \$674,000 to continue working with private landowners in the upper reaches of the watershed and institute land management practices that will ultimately benefit the water quality and fisheries in the Sacramento River. Providing private landowners with the information, technology, and cost-share assistance to implement practices designed to improve water quality, reduce soil erosion and sediment loads will contribute toward a multitude of CALFED objectives. More importantly, the funds will be used to implement projects that address several objectives in a mutually beneficial manner. Further, the projects will demonstrate that if the watershed is in a healthy state, the economic returns to the private landowner, the agricultural industry, and the rural community will increase.

b. Location and/or geographic boundaries of project

The Colusa Basin drainage area comprises nearly 1,036,000 acres (approximately 1,620 square miles) of valley land and foothills of the Coast Range Mountains within the Sacramento Valley. Within this area, the District encompasses approximately 650,000 acres of valley lands, extending from Knights Landing in the south (Yolo County), northward to the City of Orland, with the Sacramento River and the foothills forming the east and west boundaries. The District also contains numerous communities, including Artois, Willows, Glenn, Princeton, Bayless, Maxwell, Williams, Colusa, Grimes, Arbuckle, Dunnigan, Zamora and Yolo. Most of the towns are located along Interstate 5 corridor.

The Basin contains 13 significant watersheds that drain winter storm water into the region's main drainage facility, the Drain. The Drain is a manmade facility that collects and conveys irrigation return flows to the Knights Landing Outfall Gates where drain waters discharge into the Sacramento River. During the summer months, the numerous streams draining the foothills contain very little flow or are dry.

Most of the land within the District is devoted to agricultural production including irrigated row crops, orchards, vineyards, and grazing land. Total irrigated land is approximately 446,000 acres. Water for irrigation is provided by the Tehama-Colusa, Glenn-Colusa Canals, the Sacramento River, the Drain, or groundwater. Grazing lands are primarily found in the foothills. Agriculture is the number one industry. See attached maps.

c. Expected Benefit(s)

To solve problems such as flooding/drainage, erosion, sediment control and poor water quality, the natural resources within the Drain will need to be managed on a sustainable basis. Approximately ten projects will be designed and implemented on private land to achieve the following benefits: Sheet and rill, gully and streambank erosion rates will be reduced. Sedimentation, and thus water quality, in downstream waterbodies will improve. Organic matter in soils will improve, which will lead to increased filtration and less runoff and sedimentation in the Drain. Soil compaction will also decrease, leading to less runoff. Improvements in vegetation and hydrologic condition of the upper watershed will allow water to be stored in the soil longer and slowly released out into streams and creeks longer into the summer months. Pesticides and sediment going into the Drain will be reduced.

Ultimately, the instream aquatic habitat will improve because of reduced soil erosion and sediment loads, and improved water quality. Reduction of sediment and pesticides into the Sacramento River will benefit Winter and Spring run Chinook salmon, late-fall run chinook salmon, steelhead trout, green sturgeon, and striped bass. Reestablishment of native riparian and wetland vegetation will increase wildlife diversity along riparian areas, which is especially beneficial to neotropical birds. The ultimate benefit that will be achieved with this project is the watershed management approach that incorporates all stakeholders in the watershed. This approach has been very successful with respect to obtaining support from local constituents, both technical and financial; facilitating public outreach; educating local landowners; and resolving multiple issues of concern in the same project, thus leveraging monies to accomplish more than one objective.

d. Background and Biological/Technical Justification

The purpose of this proposal is to implement ten restoration projects that address water quality, erosion, sediment control, flooding and drainage problems on private lands that impact the Drain.

Flooding and Drainage: Stormwater runoff frequently exceeds creek and drain channel capacities in the Basin causing flooding of agricultural land, urban areas, public infrastructure and damaging wildlife habitat. The main watercourse for the Colusa Basin is called the Colusa Basin Drain, a manmade drain. Flooding affects up to 100,000 acres. The Drain was designed to convey irrigation return flows, not to accommodate flood waters. Opportunities to alleviate some flood problems can be addressed through land use changes on privately owned land in the upper reaches of the watershed. Specifically, rangeland grazing practices can be implemented to minimize runoff and enhance groundwater recharge efforts. Creeks and riparian corridors can be restored to increase water infiltration rates and flow detention. Stockwater ponds and shallow water areas can be constructed to reduce peak runoff and will improve

wildlife habitat, especially along riparian corridors and streambeds. Restoring habitat corridors on field borders, drains and return irrigation facilities will reduce downstream sedimentation in creeks and drains.

Erosion and sediment control: High velocity runoff during severe winter storm events erodes creeks and streams causing considerable damage to existing vegetation and streambeds extending into hillsides and farmland and eventually deposits the sediment into the Drain. To mitigate some of these impacts modified grazing practices can be implemented to improve soil characteristics and ultimately retain water in the upper watershed. Field drop pipes can be installed with small sediment basins to retain sediment from highly erosive crop lands, which will also decrease sediment deposition in the Drain.

Water Quality: Historical water quality test data suggests that the Drain is the largest single source of agricultural water discharge into the Sacramento River system, containing a significant level of suspended solids load. Numerous practices can be implemented on private lands that will reduce suspended solids, reduce sediment loads and improve the overall quality of the water. Specifically, vegetation established in drains and canal banks will enhance water filtration and assimilate nutrient runoff. Tailwater ponds can be constructed to trap sediment, enhance groundwater recharge efforts and improve water quality. Stockponds and riparian areas can be fenced and managed to minimize access to livestock, reduce soil compaction, improve water quality, decrease runoff, and decrease turbidity. Field drain entrapments and filter strips can be created to filter irrigation and drainage runoff.

e. Proposed Scope of Work

Following existing WCB procedures, WCB staff will work with RCD staff to identify landowners who are willing to participate in this program. Working cooperatively with these landowners, projects will be designed to restore wetland, riparian and aquatic habitat so that the restoration effort also provides a flood/drainage benefit, soil erosion/sediment load benefit and/or a water quality benefit. Herein lies the unique aspect of this project. The restoration of wetland and riparian habitat facilitates the reduction of "stressors" that are having a negative impact upon the Drain and ultimately the multitude of species that are dependent upon the Sacramento River.

To achieve these benefits, WCB is requesting \$674,000. Of this amount, \$512,000 would be awarded to the WCB for direct, on-the-ground, landowner improvements and \$162,000, would be awarded to the GRCD. The funds awarded to the GRCD will be used to hire one additional staff person at the GS 9 level. This staff person would be hired (under a three-year contract) by the Glenn RCD, and working with WCB staff, be responsible for providing technical assistance, project design and monitoring the implementation and maintenance of the project. In addition, this staff person will be responsible for the coordination and development of at least, three watershed workshops.

Once a year, a watershed workshop will be made available to all interested landowners and agency personnel in the Colusa Basin Drainage District. The purpose of the workshop will be to provide information and technology regarding the resource needs of a healthy watershed and how productive agricultural operations and grazing practices can be integrated into the watershed. Information obtained from the workshops will be very beneficial to participating landowners, as they will be responsible for

managing and maintaining the habitat improvements for at least a 10-year period. A detailed management plan outlining the required management techniques will accompany each agreement the landowner will be required to sign. All operation and maintenance costs will be the responsibility of the participating landowner.

WCB and RCD staff anticipate the first year will be dedicated to identifying willing landowners and the design of the restoration efforts. On-the-ground restoration efforts will be completed within the first two years. As each project is implemented and on-the-ground improvements are made, the project will be monitored for two years following the restoration effort.

Once the project is fully designed, a grant agreement and landowner operation and maintenance agreement will be developed and signed by all participating partners. The entire package will then be presented to the Wildlife Conservation Board for final approval. Once the WCB Board has approved the project, the actual construction and restoration effort can begin. The WCB Board meets approximately four times per year. Staff anticipates presenting at least two projects at each Board meeting. As projects are developed and taken to the WCB Board for final approval, CALFED staff will be provided with a complete packet of information presented to the WCB Board. As projects are brought on line, WCB staff will provide CALFED staff with quarterly reports outlining the progress to date, and the results of all monitoring and evaluation efforts.

f. Monitoring and Data Evaluation

Monitoring and project evaluation will occur annually for three years after the land improvements and restoration efforts have been completed. The project team members, i.e., staff from the local RCD, WCB, and DFG will meet with the landowner and evaluate prior year efforts. At that time, the preestablished goals and objectives of the project will be evaluated and a determination made how well the restoration and land management practices are meeting the expressed goals and objectives. If changes need to be made, the landowners operating and maintenance agreement will be adjusted accordingly. It is important to note that projects such as those described in this proposal are dynamic in nature. As such, there is a great deal of flexibility required with respect to measuring accomplishments against preestablished goals and objectives. Previous efforts have demonstrated the critical importance of annual reviews and the ability to change management practices that are responsive to the changing dynamics of the land.

g. Implementability

As a State agency, the WCB will serve as the lead agency for purposes of complying with all applicable NEPA and CEQA provisions. WCB will disperse grant funds after all applicable permits have been obtained. All WCB grant funds are dispersed on a reimbursable basis. As such, invoices are reviewed and the quality of the work is verified prior to awarding any funds to the grantee (i.e., the local RCD). Because these projects are all designed to accomplish more than one objective, i.e., flood control, soil and sediment control and improved water quality, all stakeholders that might have an interest in the restoration efforts are consulted and included in the partnership during the development phase of the

project. Concerns expressed by the stakeholders are addressed before final design and before projects are taken to the Wildlife Conservation Board for final approval. The WCB only works with willing landowners, as such, there is a built-in interest and commitment by the landowners that negate many problems associated with reluctant participants.

IV. Costs and Schedule to Implement Proposed Project

a. Budget Costs

DESCRIPTION OF COST ITEM	ESTIMATED COST
WCB	
Landowner Capitol Improvements	\$500,000
WCB Project Administration	<u>12,000</u>
Subtotal WCB:	\$512,000
Glenn RCD	
Salaries & Benefits	\$132,000
(GS 9 position, mid-range, for 3-years)	
RCD Project Administration	7,500
Office supplies (\$500/year)	15,000
Vehicle gasoline (\$1,000/year)	3,000
Water Quality Monitoring Equipment	
Test kits, viles, nets (1 time expenses)	700
chemicals (\$100/year)	300
Photo Monitoring Equipment	
Cameras (1-time)	500
Film (\$500/year)	1,500
Landowner Workshops (\$500/year)	<u>1,500</u>
Subtotal Glenn RCD:	\$162,000
Total Project Costs:	\$674,000

b. Schedule Milestones

From the time funds are approved by CALFED, it will take approximately 36 months to complete this project. The monies allocated for the Glenn RCD staff position should be awarded to the RCD at the time the proposal is approved. This will facilitate the RCD's ability to advertise and contract for an additional staff person. The WCB meets approximately four times per year. As such, staff will present two or three projects per Board meeting for final review and approval.

It is estimated that each project will cost approximately \$50,000, however, this will vary depending upon the size of the property and the nature of restoration efforts that will need to be made. The WCB would request reimbursement of project funds from CALFED once the projects are approved by the Board. Once the full Board approves the project, construction and restoration efforts can begin. It is important to note that most of the restoration effort will occur during the summer and early fall. Winter and spring rains will determine how long restoration and construction efforts can continue. Landowner watershed workshops will be conducted during the winter months.

c. *Third Party Impacts*

There are no third party impacts associated with this project. Most third party issues are associated with the detrimental impact on agricultural operations, reductions in the local tax base, and/or flood and drainage impacts. This project is designed to integrate agricultural operations into the watershed effort, not displace agricultural and grazing operations. Furthermore, there should be no impact on the local tax base since sustainable agricultural and grazing operations will continue. With respect to flooding, the projects are designed to remove peak flows and slow down the flow of floodwaters. As such, flooding related impacts should be reduced.

V. Applicant Qualification

In 1990, the WCB was mandated to implement the Inland Wetlands Conservation Program (IWCP). The purpose of the program is clearly defined, "... to carry out the programs of the Central Valley Habitat Joint Venture." While the purpose of the program is clearly defined, the program has an underlying mission to create and implement projects that make economic, and social and environmental sense. Working with other joint venture partners, special districts and local resource conservation district in the Central Valley, the program has become very innovative at protecting and restoring critical habitat, primarily wetlands and waterfowl habitat in the Central Valley.

The WCB/IWCP has implemented over 50 projects designed to protect, restore or enhance wetlands and waterfowl habitat in the Central Valley. To date, the Board has authorized the expenditure of approximately \$13.1 million to protect critical wetland and waterfowl resources in the Central Valley pursuant to the goals and objectives of the Central Valley Habitat Joint Venture Plan. Although the program is mandated to protect wetlands and waterfowl habitat, there is recognition that wetland habitat can serve a multitude of functions. As such, projects have been designed and implemented that perform a

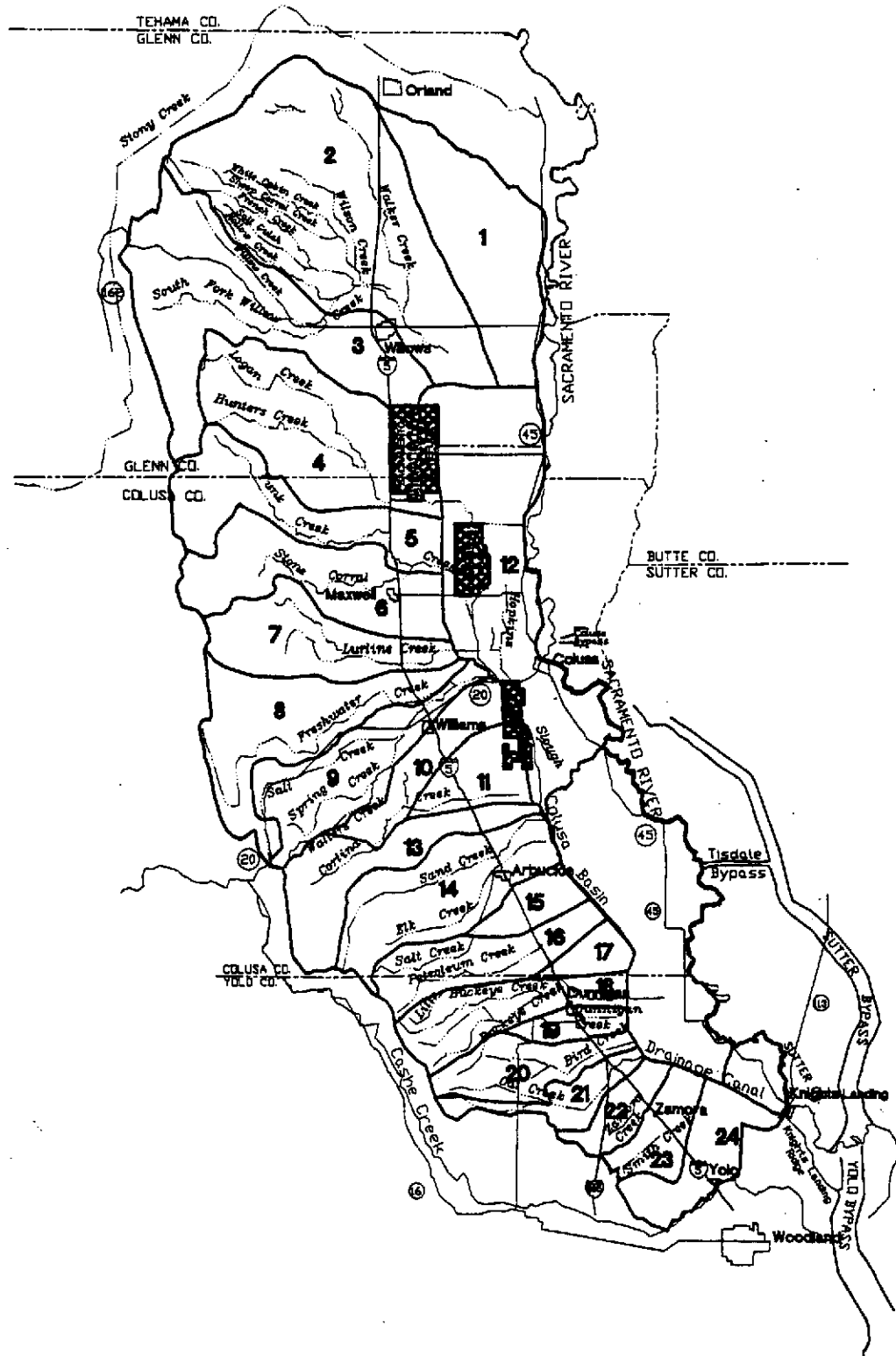
conjunctive use, i.e., they meet more than the one objective of providing critical waterfowl habitat. The success of the IWCP is in-part attributed to the public/private partnerships developed to address those issues impacting wetlands and waterfowl habitat in the Central Valley. Working with local Resource Conservation Districts, water and irrigation districts, private conservation organizations and more importantly, private landowners, the IWCP has implemented projects that address waterfowl and wetland needs on an ecosystem or watershed basis.

Capitalizing on the strengths associated with public/private partnerships, the program has demonstrated that multiple objectives can be achieved and mutual benefits obtained from multipurpose projects. Further, recognizing that the agricultural industry is one of the most important economic contributors to California's economy, the program has been instrumental at integrating the needs of the agricultural industry into wetland preservation efforts. Working with diverse interest groups or stakeholders, projects have been implemented that incorporate productive agriculture, retain private ownership, contribute toward that local tax base and more importantly, empower local landowners to practice conservation efforts that preserve the resource, while maintaining economic activities on the land.

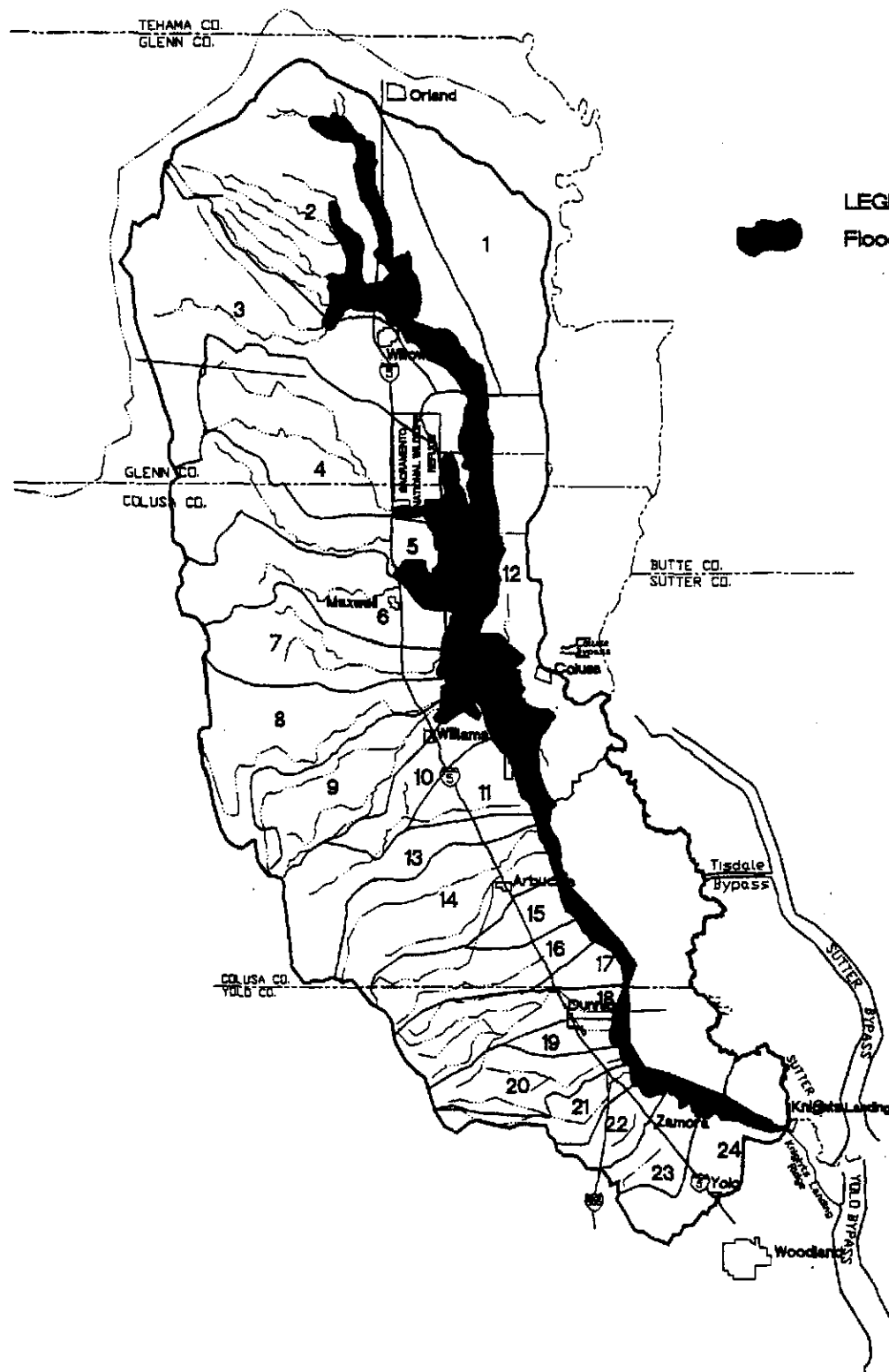
VI. Compliance with Standard Terms and Conditions

The proposed project will be implemented according to standard terms and conditions governing state agencies.

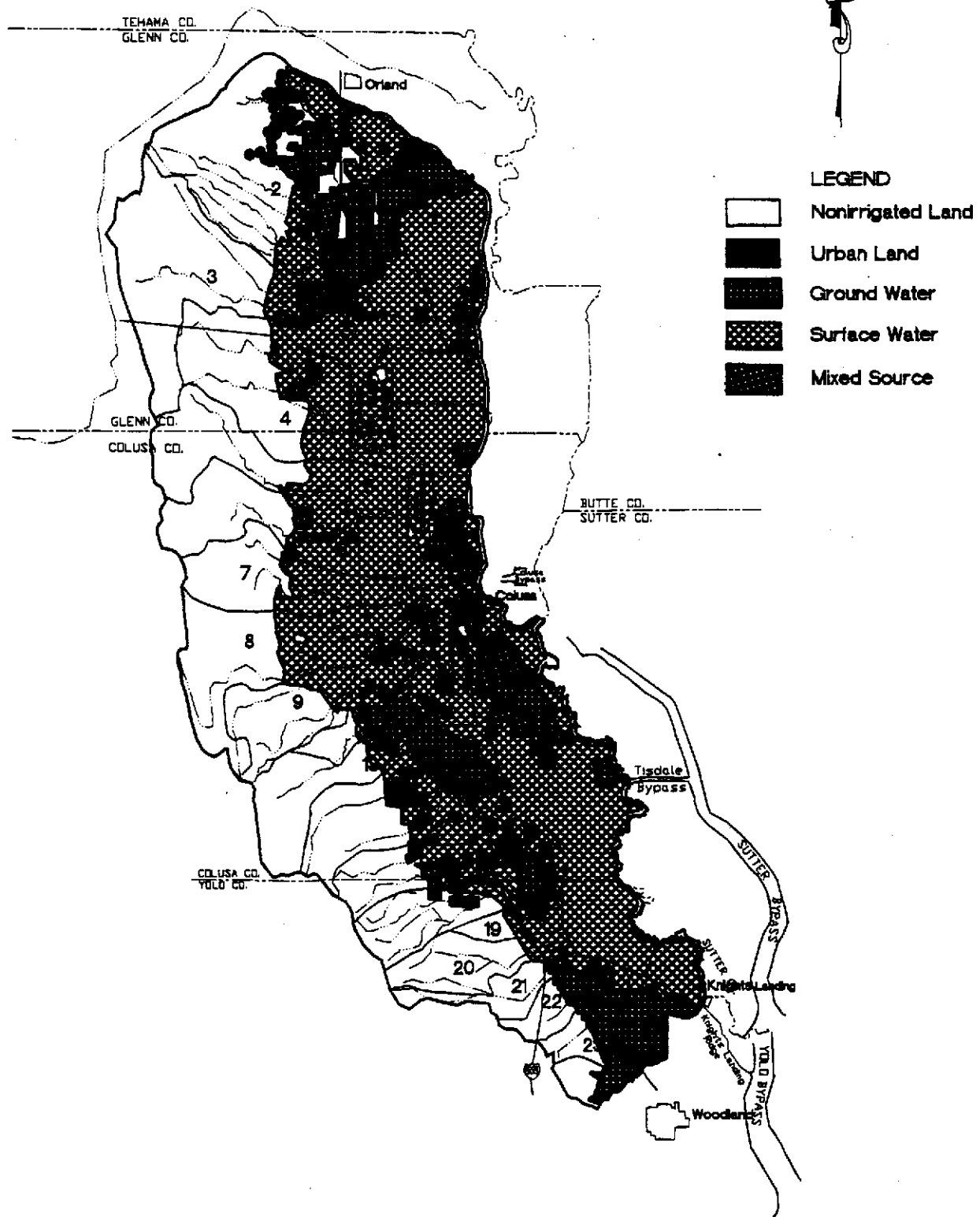
A non-discrimination compliance statement is attached for the Wildlife Conservation Board.



COLUSA BASIN DRAINAGE AREA



COLUSA BASIN DRAINAGE AREA
FLOODING ZONES



COLUSA BASIN DRAINAGE AREA
IRRIGATED LANDS - 1988

NONDISCRIMINATION COMPLIANCE STATEMENT

STD. 19 (REV. 3-91)

COMPANY NAME

Wildlife Conservation Board

The company named above (hereinafter referred to as "prospective contractor") hereby certifies, unless specifically exempted, compliance with Government Code Section 12990 and California Code of Regulations, Title 2, Division 4, Chapter 5 in matters relating to the development, implementation and maintenance of a nondiscrimination program. Prospective contractor agrees not to unlawfully discriminate against any employee or applicant for employment because of race, religion, color, national origin, ancestry, physical handicap, medical condition (cancer related), marital status, sex or age (over forty).

CERTIFICATION

I, the official named below, hereby swear that I am duly authorized to legally bind the prospective contractor to the above described certification. I am fully aware that this certification, executed on the date and in the county below, is made under penalty of perjury under the laws of the State of California.

OFFICIAL'S NAME

W. John Schmidt

DATE EXECUTED

July 25, 1997

EXECUTED IN THE COUNTY OF

Sacramento

PROSPECTIVE CONTRACTOR'S SIGNATURE

PROSPECTIVE CONTRACTOR'S TITLE

Executive Director

PROSPECTIVE CONTRACTOR'S FEDERAL EMPLOYER IDENTIFICATION NUMBER

68-0296961

NONDISCRIMINATION CLAUSE

(OCP - 1)

1. During the performance of this contract, contractor and its subcontractors shall not unlawfully discriminate against any employee or applicant for employment because of race, religion, color, national origin, ancestry, physical handicap, medical condition, marital status, age (over 40) or sex. Contractors and subcontractors shall insure that the evaluation and treatment of their employees and applicants for employment are free of such discrimination. Contractors and subcontractors shall comply with the provisions of the Fair Employment and Housing Act (Government Code, Section 12900 et seq.) and the applicable regulations promulgated thereunder (California Administrative Code, Title 2, Section 7285.0 et seq.). The applicable regulations of the Fair Employment and Housing Commission implementing Government Code, Section 12990, set forth in Chapter 5 of Division 4 of Title 2 of the California Administrative Code are incorporated into this contract by reference and made a part hereof as if set forth in full. Contractor and its subcontractors shall give written notice of their obligations under this clause to labor organizations with which they have a collective bargaining or other agreement.
2. This contractor shall include the nondiscrimination and compliance provisions of this clause in all subcontracts to perform work under the contract.